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EXAMINER

TATE, CHRISTOPHER ROBIN

ART UNIT

PAPER NUMBER

1651

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/717,445

Applicant(s)

Romanczyk JR, et al.

Examiner

Christopher Tate

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 3, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-58 is/are pending in the application.
- 4a) Of the above, claim(s) 57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-56 and 58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s): _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s): 7 and 1 6) ☐ Other: _____

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DETAILED ACTION

Applicant's election with traverse of Group VI (canceled claims 27-42: which reasonably correspond to new claims 44-56 and 58; although new independent claims 56 and 58 should properly be limited to the food additive being a cocoa epicatechin and/or oligomers thereof - accordingly, please note that an additional restriction requirement may be deemed necessary in a subsequent Office action with respect to claims 56 and 58, based upon how these claims are amended in response to this Office action) in Paper No. 12 is acknowledged. The traversal is on the ground(s) that the invention of Group VII (canceled claim 43: which reasonably corresponds to new claim 57), drawn to a synthetic cocoa procyanidin/polyphenol (such as a synthetic oligomer of epicatechin), is also drawn to a food composition and, thus, such a search would not be burdensome. This is not found persuasive because a prior art reference which discloses a cocoa extract containing epicatechin and/or epicatechin oligomers useful in a food (e.g., see art rejections below) would not necessarily anticipate or even make obvious a synthetic cocoa procyanidin/polyphenol (such as a synthetic oligomer of epicatechin) for use in a food. Further, the consideration for patentability is different in each case. Thus, it would be an undue burden to examine the above inventions in one application [As noted above, newly submitted claim 57 is directed to the non-elected invention of Group VII. Accordingly, claim 57 is withdrawn from consideration as being directed to a non-elected invention - see 37 CFR 1.142(b) and MPEP § 821.03]. The requirement is still deemed proper and is therefore made FINAL.

Claims 44-56 and 58 are presented for examination on the merits.

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Specification

The instant disclosure differs from that of the divisional parent and grandparent applications (Application Nos. 09/172,873, 08/839,446, 08/687,885, and 08/317,226) - i.e, pages 47-52 are missing from the instant specification (although Applicants state in Paper No. 4 that pages 47-54 are missing therefrom). Please note that the addition and/or deletion of recitations from a continuation (divisional) application is impermissible as both constitute new matter. New matter (including deletions) is only permitted to be introduced in a continuation-in-part (CIP) application. Accordingly, the specification is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no new matter shall be introduced into the disclosure of the invention.

Because of the differences between the instant specification and the parent applications, a substitute specification (which reintroduces the missing text of original pages 47-52) is requested.

A substitute specification filed under 37 CFR 1.125(a) must only contain subject matter from the parent specification and any previously entered amendment under 37 CFR 1.121. If the substitute specification contains additional subject matter not of record, the substitute specification must be filed under 37 CFR 1.125(b) and must be accompanied by: 1) a statement that the substitute specification contains no new matter; and 2) a marked-up copy showing the amendments to be made via the substitute specification relative to the specification at the time the substitute specification is filed.

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Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 44-56 and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 44-55 are rendered vague and indefinite because in claim 44, the food additive is defined as a singular cocoa polyphenol (e.g., epicatechin), however the dependent claims therefrom appear to mostly be defining a mixture of cocoa polyphenols (e.g., a mixture of catechin, epicatechin, and/or procyanidin oligomer/epicatechin oligomers), not just a singular cocoa polyphenol. Accordingly, most of the dependent claims are drawn to food additives composed of plural cocoa polyphenols and, thus, are improperly outside the limitations of claim 44 from which they directly or indirectly depend, making the claims vague, indefinite, and confusing.

Claim 46 is rendered vague and indefinite by the phrase "wherein the procyanidin oligomers include dimers through dodecamers". Does this phrase mean that the cocoa polyphenol comprises all of these oligomers or just includes some of them?

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Claim 49 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: that the cocoa powder of step (d) is defatted prior to the step of extracting the cocoa polyphenols from the cocoa powder (step e). Based upon the instant and original teachings, this defatting step is clearly disclosed as being essential in providing the instantly disclosed product - a cocoa extract with enhanced levels of cocoa procyanidins therein (see, e.g., claims 1-3 in the grandparent patent No. 5,554,645).

Claims 47-55 are exceptionally vague and indefinite because of their dependency - i.e., claim 49 depends from claim 51, and claim 51 depends from claim 49. The rest of the cited claims depend directly or indirectly from these two claims. Accordingly, as drafted, claims 47-55 are essentially unsearchable.

Claims 47, 49, and 54 recite the limitation "the cocoa extract" in line 1 of each. There is insufficient antecedent basis for this limitation in these claims.

Claim 48 recites the limitation "certain cocoa procyanidin fractions" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claims 56 and 58 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: that the food additive is a cocoa epicatechin and/or cocoa epicatechin oligomer.

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Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 44-56 and 58 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3 and 13 of U.S. Patent No. 5,554,645.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because the instant claims are drawn to a food composition comprising a cocoa polyphenol as food additive (such as prepared by the process of instant claim 49), whereas claim 13 of US '645 is drawn to an antioxidant or preservative composition consisting essentially of a cocoa extract (containing cocoa polyphenols therein), whereby the cocoa extract is prepared by the process of claims 1-3 therein (which is essentially the same process of producing the cocoa polyphenol extract product of the instantly claimed food additive). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to add the claimed cocoa extract preservative of US '645 to a foodstuff so as to beneficially preserve the foodstuff, especially since the addition of preservatives to foodstuff for such beneficial purpose is notoriously well known and accepted in the art to advantageously prolong its freshness and/or storage by inhibiting spoilage thereof.

Claims 44-56 and 58 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of U.S. Patent No. 6,399,139. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are drawn to food compositions to which cocoa polyphenols are added.

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Claims 44-56 and 58 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over the claims of copending Application No. 09/768,473. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are apparently drawn to food compositions comprising cocoa polyphenols.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 44-56 and 58 are rejected under 35 U.S.C. 102(b) as being anticipated by Zieglader et al. (CCB Rev., 1983), Omori (JP 08205818 - JPAB Abstract), Maruyama et al. (JP 04077424), Kattenberg (US 4,704,292), Helmona AG (FR 2307779 - DWPI Abstract + French patent), Osakabe et al. (JP 7-274894 - English translation), or Osakabe et al. (JP 7-213251 - English translation), with evidence provided by Hammerstone et al. (J. Agricult. Food Chem., 1999 - please note that Hammerstone et al. is not being cited as prior art, but instead as evidence to show that various prior art cocoa extracts inherently contain polyphenols such as claimed).

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Although difficult to interpret due to the U.S.C. 112, second paragraph rejections above, a food comprising a cocoa polyphenol such as epicatechin, catechin, procyanidin oligomers, and/or epicatechin oligomers is claimed (please note that, as drafted, claims 47-55 are essentially unsearchable other than perhaps this broadly defined concept for the reasons discussed *supra*).

Each of the cited references teach food compositions to which cocoa polyphenols are added. For example, Zieglader et al. teach the addition of epicatechin-containing cocoa extracts (in which interfering xanthine alkaloids such as caffeine and theobromine have been removed) to foods such as various fat-containing foods, including edible vegetable oils, so as to act as an antioxidant to increase the stability of (e.g., preserve) such foodstuffs (see entire document). As evidenced by Hammerstone et al., the cocoa extracts taught by Zieglader et al. would inherently also contain other naturally occurring polyphenols such as catechin and epicatechin/procyanidin oligomers therein (see entire document of Hammerstone et al. including Figures). Omori teaches the addition of epicatechin or polymers (oligomers) thereof to health food (see abstract). Maruyama et al. teach the addition of epicatechin, as well as dimers and/or trimers thereof to hard candy - which constitutes a food (see abstract). Kattenberg teaches the addition of a cocoa powder extract to food such as various milk products whereby the cocoa powder extract is disclosed as containing monomeric and polymeric (oligomeric) polyphenols (polyhydroxyphenols) such as catechin, dimeric procyanidines B1 to B5, trimeric procyanidin C1 and other related components (see, e.g., abstract, col 4, lines 47-67, and claims). Again, as evidenced by Hammerstone et al. such a cocoa powder extract as disclosed by Kattenberg would

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inherently contain naturally occurring polyphenols such as epicatechin and epicatechin oligomers therein (see entire document of Hammerstone et al. including Figures). Helmona AG teaches the addition of monomeric and oligomeric catechins found in cocoa to foods as an antioxidant (see DWPI abstract and pages 1-2 of the French patent). Again, as evidenced by Hammerstone et al., the cocoa catechin monomers and oligomers disclosed by Helmona AG would inherently comprise catechins such as naturally occurring epicatechin and epicatechin/procyanidin oligomers therein (see entire document of Hammerstone et al. including Figures). Each of the Osakabe et al. references teach the addition of cocoa extract having antioxidant activity to food (e.g., cookies) - see English translations. Again, as evidenced by Hammerstone et al., the cocoa extracts disclosed by the Osakabe et al. references would inherently comprise naturally occurring polyphenols such as epicatechin, catechin, and epicatechin/procyanidin oligomers therein (see entire document of Hammerstone et al. including Figures).

Therefore, each of the cited references is deemed to anticipate the instant claims above.

Claims 44 and 47-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashket (US 4,906,480).

Kashket teaches the addition of a polyphenol such as epicatechin (e.g., obtained from cocoa) to food (see, e.g., abstract, col 2, lines 3-29, and claims including claims 3 and 15).

Therefore, the reference is deemed to anticipate the instant claims above.

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Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 44-56 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zielader et al. (CCB Rev., 1983), Omori (JP 08205818 - JPAB Abstract), Maruyama et al. (JP 04077424), Kattenberg (US 4,704,292), Helmona AG (FR 2307779 - DWPI Abstract + French patent), Osakabe et al. (JP 7-274894 - English translation), Osakabe et al. (JP 7-213251 - English translation), and/or Kashket (US 4,906,480), and (if necessary) in view of Clappertone et al. (XVI Intl. Conf. of Groupe Polyphenols, 1992), with evidence provided by Hammerstone et al. (J. Agricult. Food Chem., 1999 - again, please note that Hammerstone et al. is not being cited as prior art, but instead as evidence to show that various prior art cocoa extracts inherently contain polyphenols such as claimed).

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The primary references are relied upon for the reasons set forth above.

Clappertone et al. teaches that xanthine alkaloids such as caffeine and theobromine are associated with the bitter astringent taste in cocoa (see, e.g, page 112) .

If not expressly taught, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to remove xanthine alkaloids from one or more of the reference cocoa extracts because Zieglader et al. beneficially teach that xanthine alkaloids such as caffeine and theobromine interfere with the antioxidant activity of cocoa polyphenols and, if necessary, because Clappertone et al. beneficially teach that xanthine alkaloids impart bitterness and astringency to cocoa products, which would be undesirable when adding the reference cocoa extracts to food, as disclosed therein. In addition, please note that, as evidenced by the analytical assays performed by Clappertone et al. on cocoa products - the cocoa and cocoa extracts discussed above would intrinsically contain catechins, epicatechin, and epicatechin/procyanidin oligomers (see entire document including page 114-Table 1) as claimed..

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

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Conclusion

No claim is allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please note that the IDS reference (JP 08-205818 Abstract) submitted February 25, 2002 (Paper No. 10) had been considered (and relied upon), however a PTO-1449 form was not submitted therewith for the Examiner to sign. This reference has been made of record by the Examiner in the attached PTO-892 list of references and, therefore, it is not necessary for Applicants to submit a PTO-1449 listing this reference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Tate whose telephone number is (703) 305-7114. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached at (703) 308-4743. The Group receptionist may be reached at (703) 308-0196. The fax number for art unit 1651 is (703) 308-4242.



Christopher R. Tate
Primary Examiner, Group 1651